



US Army Corps  
of Engineers

# Construction Bulletin

No. 95-18 Issuing Office: CEMP-CE Issue Date: 8/7/95 Exp. Date: 31 DEC 97

## CEMP-C

**Subject:** Commissioning of HVAC Systems

**Applicability:** GUIDANCE

Reference: CEGS 15995 Commissioning Of HVAC Specifications  
Air Force ETL 90-10 Commissioning Of HVAC Systems

1. The purpose of this Construction Bulletin is to cover the requirements for Commissioning of HVAC Systems. Recent field evaluations have disclosed practices which are in need of improvement.
2. Commissioning of HVAC Systems is not being done on all Air Force projects. CEGS 15995 is mandatory for use on all Air Force projects and optional for Army work. This requirement is stated in the notes to the designer on the use of the guide specification. Air Force ETL 90-10 preceded CEGS 15995 mandating the HVAC commissioning process.
3. Many contractors are not scheduling sufficient time at the end of the contract for commissioning. Commissioning needs to be emphasized to the contractor during the Preconstruction Conference and discussed in detail during the Mutual Understanding Conference. Commissioning of HVAC systems shall begin only after all work required in related sections, including Sections HVAC Controls Systems and Testing, Adjusting, and Balancing of HVAC Systems has been successfully completed. All test and inspection reports and O&M manuals shall be submitted and approved before commissioning is conducted. The Area/Resident Engineer should carefully review the contractor's progress schedule to ensure sufficient time and resources are assigned to the commissioning process near the end of construction. Appropriate progress payments must be retained and held until completion of the commissioning process.
4. Funds for the HVAC Commissioning process are not being included or identified for planning and design and EDC activities. Appropriate funding must be established and maintained throughout the construction period for Government participation in the commissioning process. Planning and design funds should be utilized for the designers development of the commissioning specification prior to construction contract award. EDC funding should be utilized for the designers participation in the commissioning process during construction. The designer and the using agent must be kept informed of any changes in the contractor's schedule which affect the timing of the commissioning process.

5. Frequently the Design Agent's and Using Agency's Representative are not represented on the commissioning team. Commissioning which includes pre-commissioning checks and functional performance testing shall be performed by a team made-up of the following members.

Q	Contractor's Chief Quality Control Representative
M	Contractor's Mechanical Representative
E	Contractor's Electrical Representative
T	Contractor's Testing, Adjusting, and Balancing Representative
C	Contractor's Controls Representative
D	Design Agent's Representative
O	Contracting Officer's Representative
U	Using Agency's Representative

Commissioning is documented with checklists provided in the contract specifications. Acceptance by each commissioning team member of each pre-commissioning checklist item shall be indicated by initials and dated. Acceptance by each commissioning team member of each functional performance test checklist shall be indicated by signature and date. Participation by the designer and user's representative is critical to the commissioning process. Therefore, HQUSACE wants feedback on the projects that did not have a complete commissioning team and which member was not represented. This will be monitored by the DCE inspection teams during their site visits.

6. The pre-commissioning checks are not being performed by field personnel if they feel it duplicates the checking, testing, and inspection methods established in the related sections. Requirements in related specification sections are independent from the requirements of CEGS 15995, Commissioning of HVAC Systems, and shall not be used to satisfy any of the requirements specified in CEGS 15995. The major reason for duplication of requirements is to ensure that the contractor's Quality Control Program is functioning effectively and that the construction end product complies with the contract plans and specifications.

7. The Functional Performance tests are being performed before all pre-commissioning checks have been successfully completed and all deficiencies corrected. CEGS 15995 Commissioning of HVAC Systems requires functional performance tests shall begin only after all pre-commissioning checks have been successfully completed. Functional Performance tests shall prove all modes of the sequences of operation. Tests shall begin with equipment or components and shall progress through subsystems to complete systems. Any deficiencies or failures noted shall be corrected in accordance with applicable contract requirements. Each test shall be repeated until it has been completed with no errors.

CEMP-CE

SUBJECT: Commissioning of HVAC Systems

8. CEGS 15995 Commissioning of HVAC Systems is not always being edited to make it job specific. The appropriate checklist should be included in the contract specification and identified for each HVAC equipment component. The designer needs to add checklists for equipment or systems not included in the CEGS 15995 and modify the checklists where necessary for specific project requirements. During the BCOE review make sure the checklists have been edited to reflect project requirements.

9. This Construction Bulletin has been coordinated with the following HQUSACE elements, Directorate of Military Programs, Engineer Division CEMP-ET and Operations, Construction and Readiness Division (CECW-OC). Point of Contact is Gary Bauer CEMP-CE.

  
CHARLES R. SCHROER  
Chief Construction Division